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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Egbert Classen

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INTERNATIONAL BUSINESS MACHINES CORPORATION

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INTELLECTUAL PROPERTY LAW

SAN JOSE, CA 95120-6099

EXAMINER

SMITH, NATASHA N

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,246	Applicant(s) CLASSEN ET AL.	
	Examiner NATASHA SMITH	Art Unit 4132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 18-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>09JUN2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 09 June 2006 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. Documents DE 82 32 215 and AT 006 023 have not been considered because there is no English translation for these documents, nor is there a statement regarding the relevance of these documents.

Specification

2. The disclosure is objected to because of the following informalities: Applicant has made reference to specific claim numbers within the specification (paragraph [014]), which claims have been cancelled. The references should be deleted.

Appropriate correction is required.

Claim Objections

3. Claims 19 and 30 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

4. Regarding claim 19: The claim refers to adding "at least a portion of the basic chemical products". The independent claim 18 already requires this limitation of adding

at least a portion of the all-round additive product, since any amount added would be considered "at least a portion" of product being added.

5. Regarding claim 30: The claim refers to adding "at least a portion of the basic chemical product". The independent claim 29 already requires this limitation of adding at least a portion of product, since any amount of product added is considered "at least a portion" of product.

6. Claim 26 is objected to because of the following informalities: There is a spelling error in the term "automatic". Appropriate correction is required.

7. Claim 27 is objected to because of the following informalities: There is a spelling error of the term "comprising". Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 18-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claims 18 and 29 refer to independently adding a "reaction mixture consisting of the basic chemical products of the all-round additive product". The reaction mixture would have reacted the basic chemical products to ultimately form the reaction mixture; therefore it is unclear how the mixture would **consist of** the basic chemical products.

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11. Regarding claims 21, 24 and 31: The phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

12. Regarding claim 22: The claim refers to "storage containers that are configured in at least one container form that is a common housing with partition walls, individual separate units, and a container form that is not a common housing with partition walls or individual separate units". It is unclear which configuration is actually required to meet the limitation of the claim. It is unclear what is the relationship, if any, among refillable containerss, exchangeable containerss, and container forms that have common housing and that do not have common housing. Must more than one container be present? Must both common and not common housings be present?

13. Regarding claim 23: The claim refers to adding products that are "one of a liquid, a gel and a selected one of a powdery solid and a granular solid". The term "selected one" renders the claim unclear whether the choices include choosing one of the four listed products or choosing one from each of two groups: liquid/ gel and powdery solid/ granular solid. Further, the term "especially" makes it unclear whether the additive product must be a concentrate in order to meet the limitations of the claim.

14. Regarding claim 24: The claim recites the limitation "the micro-reactor" in line 4. There is insufficient antecedent basis for this limitation in the claim. The independent claim does not make reference to a micro-reactor. Further, the term "especially" renders the claim unclear whether the conveying device must be a micro-dosing pump in order to meet the limitations of the claim.

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15. Regarding claim 26: The claim refers to "a visual and/or audible fault indication".

The relationship between claimed elements and these fault indicators is unclear.

Specifically, it is unclear whether this indication is in addition to the automatic program interruption or whether the indication constitutes the means for the automatic program interruption.

16. Regarding claim 27: The claim recites the limitation "the storage containers" in line 2. There is insufficient antecedent basis for this limitation in the claim. The independent claim does not make reference to any storage containers.

17. Regarding claim 26: Claim element "means for producing an automatic program interruption in the event of a fault" is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description may fail to disclose the corresponding structure, material, or acts for the claimed limitations.

18. Regarding claim 27: Claim elements "means for visually displaying a fill level value" and "means for generating at least one of a visual warning and an audible warning" are means (or step) plus function limitations that invoke 35 U.S.C. 112, sixth paragraph. However, the written description may fail to disclose the corresponding structure, material, or acts for the claimed limitations.

19. Regarding claim 28: Claim elements "means for automatically notifying a dispatch device" and "means for dispatching" are means (or step) plus function limitations that invoke 35 U.S.C. 112, sixth paragraph. However, the written description may fail to disclose the corresponding structure, material, or acts for the claimed limitations.

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20. With regard to the means-plus-function limitations, applicant is required to:

(a) Amend the claims so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132 (a)).

21. If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132 (a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75 (d) and MPEP 2181 and 608.01(o).

Claim Rejections - 35 USC § 102

22. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

23. Claims 18, 19, 21, 23-25, 29-31, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Chan et al. (US 5,453,131).

24. Regarding claim 18: Chan teaches a dishwasher comprising a washing container for retaining items (see Fig. 1); and a dispenser operable to add an additive into the dishwasher (col. 1, line 64-66); the dispenser being operatively connected to an arrangement that separately stores the basic chemical products of an all-round additive product independent of one another (col. 3, lines 40-45) and the dispenser being operable to independently add into the dishwasher one basic chemical not used for clear rinsing (col. 3, lines 62-63), at least two of the basic chemical products of the all-round product together (col. 9, lines 34-36), and at least one reaction mixture consisting of the basic chemical products of the all-round additive product (col. 3, line 62- col. 4, line 4).

25. Regarding claim 19: Chan teaches the elements of claim 18, as explained above. Chan further teaches that at least a portion of the basic chemical products can be added (col. 5, lines 29-33; col. 8, lines 22-26, 38-43).

26. Regarding claim 21: Chan further teaches that only those basic chemical products which are required for a process step are added (col. 8, lines 22-26). The detergent, rinse agent, and sanitizer chemical are all required for various process steps of the dishwasher.

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27. Regarding claim 23: Chan further teaches that the basic chemical product can be a liquid (col. 3, line 43).

28. Regarding claim 24: Chan further teaches that the basic chemical products can be supplied to the washing container using a conveying device, via pumps (col. 3, lines 40-42).

29. Regarding claim 25: Chan further teaches that the timing and quantity of the detergent supply can be regulated depending on the process step (col. 6, lines 26-38).

30. Regarding claim 29: Chan teaches a method for dosing additives, the method comprising:

31. dosing into the dishwashing machine an additive product for application of the additive product during a process performed in connection with the handling of items retained in a washing container of the dishwashing machine (col. 3, lines 40-45, line 62 – col. 4, line 4);

32. the step of dosing an additive product into the dishwashing machine including dosing, from an arrangement that separately stores the basic chemical products of an all-round additive independent of one another (col. 3, lines 41-44; Fig. 1),

33. a selected one of at least one basic chemical product not used for clear rinsing of the all-round additive product (col. 3, line 62-63), at least two, but not all of the basic chemical products of the all-round additive product together (col. 9, lines 34-36), and at least one reaction mixture consisting of the basic chemical products of the all-round additive product (col. 3, line 62- col. 4, line 4).

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34. Regarding claim 30: Chan further teaches that at least a portion of the basic chemical products of an all-round product can be added (col. 8, lines 22-26).

35. Regarding claim 31: Chan further teaches dosing in only those basic chemical products required for a process step (col. 8, line 22-26).

36. Regarding claim 34: Chan further teaches dosing in an additive product while regulating the addition parameters, time and quantity of the basic chemical products depending on the process steps (col. 6, lines 26-38).

Claim Rejections - 35 USC § 103

37. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

38. Claims 20-22, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan (US 5,453,131) as applied to claim 18 above, and further in view of Graf et al. (US 4,188,807).

39. Regarding claim 20: Chan does not teach that a reaction mixture can be produced in the dosing device in a micro-reactor, at least in part by a chemical reaction.

40. Graf teaches a washing machine in which multiple cleaning agents are stored in separate containers (col. 4, lines 19-21) and reaction mixtures are produced by combining active wash substances and other agents (col. 5, lines 57-65) in a pre-mix channel (col. 21, lines 43- 49) prior to being dispensed into the washing chamber (col. 21, lines 49-53). In this sense, the pre-mix channel described by Graf serves as a

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micro-reactor where the products can combine and mix to form the final cleaning mixture. Further, Graf teaches mixtures of varying types, all of which are representative of a chemical reaction. For example, Graf teaches mixing isopropanol with a detergent to increase its solubility (col. 10, lines 48-50), and mixing enzymes with washing substances for improved cleaning (col. 10, lines 58-60). Graf also teaches that an overdose of chemicals can be avoided by adjusting the amounts of these chemical products that are actually needed for cleaning (col. 7, lines 12-22).

41. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to produce a reaction mixture in a micro-reactor of a dosing device, as taught by Graf in the system of Chan, in order to allow substances that require separate storage to be combined in the right proportions to form a cleaning agent prior to being dispensed in the wash chamber. One skilled in the art would have been motivated to do this to avoid excessive use and overdose of chemicals.

42. Regarding claim 21: In the case that Chan does not teach the dosing device adding only those basic chemical products that are required, Graf teaches adding only the necessary chemicals required for the cleaning (see Graf, col. 5, 15-18; col. 6, lines 3-12). He teaches that this is done to avoid overdose of chemicals that could be harmful to the environment (col. 3, lines 8-10)

43. It would have been obvious to one of ordinary skill in the art at the time of invention to dose only the necessary amounts of chemicals, as taught by Graf in the system of Chan, in order to avoid overdosing and detrimental effects on the environment.

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44. Regarding claim 22: Chan does not expressly disclose that the storage containers are exchangeable or refillable.

45. Graf teaches that the containers of the dispensing device are both refillable and exchangeable (col. 8, line 64- col. 9, line 6; col. 9, lines 14-20).

46. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include refillable or exchangeable containers for storing the chemical products, as taught by Graf in the system of Chan, in order to continue the use of the dishwasher once the current supply has been used.

47. Regarding claim 32: Chan does not teach that the basic chemical products react in a micro-reactor to form a liquid or gas mixture, or a mixture that is not completely a liquid or a gas.

48. Graf teaches a washing machine in which multiple cleaning agents are stored in separate containers (col. 4, lines 19-21) and reaction mixtures are produced by combining active wash substances and other agents (col. 5, lines 57-65) in a pre-mix channel (col. 21, lines 43- 49) prior to being dispensed into the washing chamber (col. 21, lines 49-53). In this sense, the pre-mix channel described by Graf serves as a micro-reactor where the products can combine and mix to form the final cleaning mixture. Further, Graf teaches mixtures of varying types, all of which are representative of a chemical reaction. For example, Graf teaches mixing isopropanol with a detergent to increase its solubility (col. 10, lines 48-50), and mixing enzymes with washing substances for improved cleaning (col. 10, lines 58-60). Further, it is understood that

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the reaction mixtures taught by Graf are, at least in part, liquid mixtures, as evidenced by the above reference to the increased solubility.

49. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to produce a reaction mixture in a micro-reactor of a dosing device, as taught by Graf in the system of Chan, in order to allow substances that require separate storage to be combined to form a cleaning agent prior to being dispensed in the wash chamber.

50. Regarding claim 33: Chan does not teach that the products are reacted together in a micro-reactor and supplied to washing container in a metered manner by a micro-dosing pump.

51. Graf teaches that the active substances are supplied to the pre-mix channel in a metered manner by gear pumps (see col. 9, lines 21-29). As previously stated, the pre-mix channel serves as the reactor where the separate chemicals combine and form a cleaning mixture to be dispensed into the washing container. Further, Graf teaches that by using pumps to meter the wash products, the dosing is accurate, and liquids of varying viscosities can be included (col. 9, lines 24-29).

52. It would have been obvious to one of ordinary skill in the art at the time of invention to supply the chemical products to the micro-reactor in a metered manner, as taught by Graf in the system of Chan, in order to control the amounts of products being supplied to the wash chamber, and to allow different types of products to be used.

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53. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (US 5,453,131) as applied to claim 18 above, and further in view of Matz (US 5,839,454).

54. Regarding claim 26: Chan does not teach regulating the supply of the basic chemical products by means of a monitoring device, nor does he teach providing a fault indication or program interruption.

55. Matz teaches an automatic dispenser with the ability to monitor the supply of products being dispensed (col. 2, lines 29-31), and produce an automatic program interruption in the event of a fault (col. 2, lines 33-35) and a visual and/ or audible fault indication (col. 3, lines 13-16). Matz teaches that by monitoring the supply and providing an indication, a forgetful user is made aware of the detergent supply, and dirty dishes can be avoided (col. 1, lines 40-50) and enough time is given to refill the product supply (col. 3, lines 46-49).

56. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to add a monitoring device and fault indication system, as taught by Matz in the method of Chan, so that the user is made aware when cleaning supply needs to be replaced, so as not to affect the cleanliness of the dishes and give the user enough time to replenish the products.

57. Regarding claim 27: Chan does not teach level sensors, visually displaying the fill value, or generating a level warning.

58. Matz teaches a dishwasher dispensing device (see abstract) in which the filling level of the storage containers can be measured by level sensors (col. 3, lines 13-16)

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and can be displayed visually by a display device (col. 3, lines 26-28; col. 5, 50-56).

Further, Matz teaches that if the level is too low, a visual and audible warning is carried out (col. 5, lines 25-30). Matz teaches that the warning is used to give the user enough time to refill the product (col. 3, lines 46-49).

59. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use level sensors to measure the filling level of the storage containers and issue a warning when the levels become low, as taught by Matz in the method of Chan, in order to avoid running out of the supply of the product.

60. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (5,453,131) and Matz (US 5,839,454) as applied to claim 27 above, and further in view of McNabb et al. (US 2002/0117511).

61. Regarding claim 28: Chan and Matz do not disclose notifying a dispatch device regarding the filling level of the containers, nor do they teach requesting additional product to be dispatched.

62. McNabb teaches a detergent dispensing system in which the filling levels of the storage container are monitored; and further, the dishwasher automatically orders additional supply from the internet when it is almost empty (page 3, [0034]). McNabb teaches that additional product can be requested before the current supply runs out (page 3, [0034]).

63. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a method of notifying a dispatch device, via an internet connection, and requesting additional product accordingly, as taught by McNabb in the

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methods of Chan and Matz, in order to obtain additional product before the existing product is used up.

Conclusion

64. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATASHA SMITH whose telephone number is (571)270-7382. The examiner can normally be reached on Monday-Thursday; 8 AM-5PM.

65. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Lavilla can be reached on (571) 272-1539. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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66. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/nns/

Natasha Smith

01 December 2008

/Michael La Villa/

Michael La Villa

Supervisory Patent Examiner, Art Unit 4132

7 December 2008